S/N 10/526026 PATENT

AMENDMENTS TO THE CLAIMS

A Listing of Claims is provided as follows and will replace any previous listing. No new matter has been added.

Listing of Claims:

1. (Currently Amended) A method for purifying a target protein from a protein solution containing the target protein by using liquid chromatography, wherein the target protein is glucose dehydrogenase derived from a microorganism belonging to the genus Burkholderia and has α, β, γ subunits, the liquid chromatography comprising:

a first step of introducing the protein solution into a column filled with a packing agent, the packing agent holding the target protein, the packing agent being an ion-exchange resin containing a quaternary ammonium group as an ion-exchange group; and

a second step of eluting the target protein by using an eluent containing a ~~hydroxy-~~cholate.

2-5. (Canceled)

6. (Previously Presented) The method for purifying protein according to Claim 1, wherein the β subunit of the glucose dehydrogenase provides electron transfer activity and has a molecular weight of approximately 43 kDa in SDS-gel electrophoresis under a reducing environment, and

the α subunit of the glucose dehydrogenase provides glucose dehydrogenation activity and has a molecular weight of approximately 60 kDa in SDS-gel electrophoresis under a reducing environment.

7. (Currently Amended) The method for purifying protein according to Claim 1, wherein the ~~hydroxy-~~cholate comprises a sodium cholate.

8. (Currently Amended) The method for purifying protein according to Claim 1, wherein the ~~hydroxy-~~cholate in the eluent is maintained at a constant concentration during the elution of the target protein from the packing agent.

9. (Currently Amended) The method for purifying protein according to Claim 8, wherein the concentration of the ~~hydroxy-~~cholate in the eluent is selected from a range of 0.5 through 2.5 wt%.

10. (Canceled)

11. (Previously Presented) The method for purifying protein according to Claim 1, wherein the microorganism is Burkholderia cepacia KS1 strain (FERM BP-7306).

12. (Previously Presented) The method for purifying protein according to Claim 1, wherein the glucose dehydrogenase is produced by a transformant,

the transformant being produced by engineering a host microorganism with DNA from a microorganism belonging to the genus Burkholderia encoding the α, β, and γ subunits.

13. (Previously Presented) The method for purifying protein according to Claim 12, wherein the host microorganism is Pseudomonas putida.

14. (Previously Presented) The method for purifying protein according to Claim 12, wherein the host microorganism is E. coli bacterium.

15-23. (Canceled)

24. (Previously Presented) The method for purifying protein according to Claim 1, wherein the α and γ subunits of the glucose dehydrogenase provide glucose dehydrogenation activity and the γ subunit has a molecular weight of approximately 14 kDa in SDS-gel electrophoresis under a reducing environment.

25. (Previously Presented) The method for purifying protein according to claim 1, wherein the first step using the ion-exchange resin is performed in a non-acidic condition.

26. (Previously Presented) The method for purifying protein according to claim 1, wherein the first step using the ion-exchange resin is performed at pH 8.